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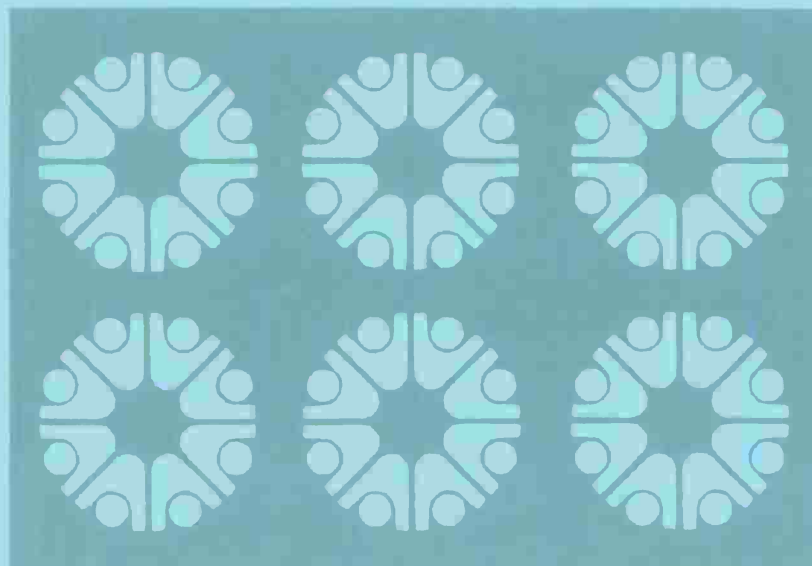
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Research Report

Technical Report #7

Characteristics of Critical
Leadership Incidents
in the Navy

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Critical incidents involving leadership problems encountered in the Navy were elicited from 70 Navy officers. Each incident included problem, leader action taken and incident outcome. Of 301 original incidents, 31 were discarded as incomplete. The remaining 270 incidents were rated by five Navy enlisted veterans who received careful training in the judgmental task but were "blind" with respect to the hypotheses

20. Abstract (continued)

under study. Judgments involved the type of problem involved
in the incident (six types were identified), the leadership
action taken (the French and Raven, 1959, modes of interpersonal
power), the difficulty of the problem, the pressure of the
setting, and the outcomes in terms of effect on performance and
morale. Ratings displayed acceptable reliability.

Of the four independent variables (problem type, diffi-
culty, setting, and type of leadership power used) type of
power accounted for the largest proportion of the variance in
the performance and morale dependent variables. Abuse of
authority and disobedience were the problems with greatest
impact on outcomes. As found in other research in this program,
Expert, Reward and Referent power had beneficial outcomes while
Coercive and Legitimate power had negative outcomes. However,
the efficacy of different forms of leadership power varied by
type of problem; another confirmation of interaction theories
of leadership!

INTRODUCTION

Research on the determinants of leadership effectiveness has
been both extensive and intensive. Reviews by various authors
(Gibb, 1969; Stogdill, 1974) have identified several major classes
of contributing variables: personal attributes of the leader,
situational determinants, dimensions of leader behavior, leader-
ship styles, climate, etc. An examination of this research suggests
that it can be characterized in the following ways: (1) Much of
the research is theory-based and is oriented to the confirmation
of a particular point of view; (2) With a few notable exceptions,
most studies investigate only one or two major variables in rela-
tion to leader effectiveness; (3) Information about leadership is
usually gathered by questionnaires limited by response biases,
scope, and validity; and (4) A large number of the studies have
dealt with artificial situations and ad hoc groups in laboratory
settings.

The purpose of the present study was to apply a new critical-
incident-based measurement approach to the study of effective leader-
ship actions based on forms of social power.

Leadership Variables

It is generally acknowledged that leadership effectiveness
is a function of the interaction of leader characteristics or
behaviors and situational factors, but few studies actually include
both sets of variables. Most research has investigated a single
set of variables to the exclusion of others. Both the individual
theorists and the situational theorists have been criticized for
this exclusionary point of view (Hollander & Julian, 1969; Gibb, 1969).

Summaries of research dealing with the following major classes of variables are found in Stogdill (1974): leader traits, leadership behaviors, leadership styles, and leader values. McGrath & Altman (1966) provide a summary of small group research which demonstrates the situational nature of leadership.

Exceptions to the above generalization are the research programs of Fiedler (1967) and Vroom and Yetton (1973). Fiedler's contingency theory of leadership includes consideration of leader orientation to people or tasks and situation favorableness defined by leader-member relations, the leader's position power, and task structure. Vroom and Yetton propose that a leader's use of various approaches to decision making in the group is based on a consideration of the need for quality of decisions, acceptance or commitment by subordinates, and the amount of time required to make the decision.

The broad classes of variables chosen for this study were the types of problems a leader is confronted with, the setting in which the problem occurs, and the actions taken to solve these problems. Leader effectiveness was studied in terms of overall favorableness of the outcome and specific performance and morale outcomes for the individual and group of subordinates involved.

Measurement of Leadership Variables

Measurement problems have plagued the study of leadership. Early trait approaches relied heavily on paper and pencil instruments to measure intellectual and personality characteristics. Personality attributes and abilities have been measured by

projective techniques, questionnaire inventories, and tests. These techniques are meant to identify abstract constructs which have been derived for purposes other than measuring leadership. One does not obtain direct measures of leadership, but rather one obtains measures of personality or ability variables which may be correlated with effective leadership.

Fiedler (1967) measured leadership style with the Least Preferred Coworker scale. Respondents are asked to think of all the people with whom they have ever worked and then they are asked to describe the person with whom it was most difficult to cooperate. To measure these descriptions, 21 bipolar adjective scales were used. Scores on the LPC scale reflect task- or relationship-orientations and are used to predict leader effectiveness in different situations.

Studies of leader behaviors have frequently relied on structured questionnaires containing a pre-determined set of behaviors. One of the most frequently used instruments is the Leadership Behavior Description Questionnaire (Hemphill & Coons, 1957). The LBDQ contains 150 items describing the actions of people in leadership positions. Participants are asked to respond to items pertaining to the behaviors of their supervisors. Respondents are required to indicate the frequency with which their respective supervisors exhibit a given behavior. A five-point scale ranging from "always" to "never" is the basis for frequency judgments. Certain items are keyed to measure consideration, while others measure initiating structure.

The Leadership Opinion Questionnaire (LOQ) was developed by Fleishman (1957) to measure the same constructs as the LBDQ. The 40-item questionnaire contains 20 items keyed for each dimension, consideration and initiating structure. Respondents are asked to indicate how frequently a leader should engage in a given behavior. Measures like the LBDQ and the LOQ are attempts to identify actual behaviors of leaders. However, although subordinates and supervisors are attempting to describe behaviors, the responses may be heavily laden with subjective biases rather than objective descriptions of behavior.

Other studies have used hypothetical or simulated situations to observe leader responses. In a questionnaire developed by Hill (1973), hypothetical managerial problems are presented to subordinates. Some of the problems are simple, while others are more complex. Some problems involve interpersonal considerations, while others are characterized by technical complexities. Four separate problem situations are presented to subordinates. Subordinates are asked to predict how their supervisor would react in each situation. Responses are scored to identify flexibility of the leader's behavior. A similar measurement approach is taken in the leaderless group discussion technique, where participants engage in an unstructured discussion of a problem, and observers rate dimensions of observed leader behavior.

The use of the critical incident approach was intended to provide a face valid measure tied to job-relevant materials. The compact accounts of complex events, and their behavioral specificity,

should reduce the demand characteristics and respondents' cognitive interpretations associated with previous leadership measures.

One of the purposes of this research study was to overcome a number of deficiencies in earlier research by developing and utilizing a new method of studying several leadership variables in a field setting. The research strategy utilized a modification of the critical incident methodology (Flanagan, 1954) to obtain descriptions of actual leadership incidents. These incident descriptions were then analyzed to determine the existence of several classes of variables and their relationship to leadership effectiveness. This approach was designed to be an empirical investigation of determinants of leadership effectiveness as it takes place in an actual work setting.

Social Power

In recent years, the notion of power relationships in leadership has received increasing attention (Hollander & Julian, 1969). Power relationships have been alternatively conceived as psychological forces impinging on the life-space of an individual (Lewin, 1936), interpersonal exchange relationships (Thibaut & Kelley, 1959), and decision making processes involving probabilities and utilities of outcomes (Pollard & Mitchell, 1972). In this study, power refers to the potential interpersonal influence one person has over another.

One of the few conceptual frameworks of the bases of social power was offered by French and Raven (1959). According to these authors, interpersonal influence is based on one or more dimensions or forms of power: (1) legitimate power based on rank and position,

(2) <u>expert</u> <u>power</u> based on knowledge, (3) <u>reward</u> <u>power</u> based on posi-
tive rewards, (4) <u>referent</u> <u>power</u> based on personal respect, and
(5) <u>coercive</u> <u>power</u> based on negative sanctions and punishment.

In most previous research, leader actions have been classified
into a single mode of power. Leader actions are characterized as
examples of expert power <u>or</u> reward power or coercive power. The
current study analyzed leader actions to identify the presence and
influence of one or more of the five bases of social power (French
& Raven, 1959) simultaneously.

In summary, the following hypotheses guided the current inves-
tigation. First, each major class of variable, namely, the type
of leadership <u>Problem</u>, the <u>Difficulty of the Problem</u>, the <u>Pressure</u>
<u>of the Setting</u>, and the leader's <u>Mode of Influence</u>, is related to
the outcome of the leadership incident. Second, a major portion
of the variation in the outcome of the incident can be explained
by the leader's action. Third, the relative importance of the
various modes of influence will vary as a function of the specific
outcome being predicted. Finally, certain types of actions will
be more effective for dealing with certain types of problems.

METHOD

The data for this study were written descriptions of leadership
incidents provided by Navy officers. These descriptions were content
analyzed, classified, and rated by a group of trained judges. The
derived numerical ratings were then statistically analyzed to note
relationships among the major variables. A brief summary of the

methodology follows; a more complete description is included in Thornton, Nealey, and Wood (1975).

Elicitation of Incidents

Reporters. Written descriptions of leadership incidents were elicited from small groups of Navy officers in informal sessions at the Puget Sound Naval Shipyard (N=30) and Whidbey Island Naval Air Station (N=40). A majority of the officers were commanders and lieutenant commanders; a small portion were from lower ranks. A wide variety of background and experience was represented. Current duty assignments were primarily in line, operational positions.

Procedure. At the beginning of each session, the researchers briefed the officers on the purpose and nature of the study, previous research on the topic, various definitions of leadership, and limitations of existing measures of leadership. A definition of leadership was offered which emphasized interpersonal influence of the leader over the follower. A primary limitation of existing measures of leadership style and behavior has been the lack of relevance to real-life problems which leaders face. Therefore, the officers were asked to think of specific instances in their past experience in the Navy. The officers were requested to include in their descriptions the following components: the problem which the leader faced, the setting in which the problem took place, the action the leader took to solve the problem, and the outcome(s) as perceived by the incident reporter. Incidents which had both favorable and unfavorable outcomes were requested. The incident reporter may have been the leader, the follower, or a third party observer.

Incidents were written on a semistructured form--basically a blank piece of paper with topical reminders along the left-hand margin stating the components of the incident which should be included.

Evaluation and Rating of Incidents

Preliminary screening. The original 301 descriptions were screened for gross deficiencies. Thirty-one were discarded because they included only statements of personal philosophy or were too brief or incomplete. No alteration of the remaining 270 incidents was made.

Judges. Five former Navy enlisted men enrolled in social science and related programs at the University of Washington were hired and trained as judges. Training included an explanation of the larger project, the way in which the incidents were collected, and the rating categories, and potential biases in judgments. Several sample incidents were rated independently and discussed as a group. Training and practice continued over two half-day sessions until the judges arrived at a high level of consistency and agreement.

Characteristics evaluated. The judges rated and classified the content of parts of the incidents in terms of the categories listed below.

Type of problem. The judges indicated the nature of the problem by checking the category or categories into which the problem might be classified. If the problem fit into two or more categories, each could be checked, but the judge was to "double

check" the category which he felt represented the basic essence of the problem. In subsequent analyses, the problem which was "double checked" was designated the primary problem and the incident scored exclusively into that category.

1. Personal problems - related to personal habits, appearance, drinking, family, financial problems, drug abuse, cleanliness, etc.

2. Performance

   a. Individual - some decrement or shortcoming in an individual's performance in duty situations, work situations, training situations, etc.

   b. Group - some decrement or shortcoming in a performance of a group (i.e., ship, station, coworkers, etc.) in duty, work, or training situations.

3. Morale

   a. Work related - morale problems directly attributable to work situations, regulations, work overloads, etc.

   b. Personnel related - morale problems related to personnel relations, bad attitudes, behavioral problems of individuals or groups, etc.

4. Leader-Subordinate Relations

   a. Poor communications - related to misunderstanding between leaders and subordinates, inadequate routes of communications, misperceived actions or attitudes, etc.

   b. Abuse of authority - characterized by situations in

which one in authority issues unnecessary commands,
verbally abuses subordinates, or otherwise behaves
in a manner not becoming his position.

c. Uncertain authority - ill-defined authority, illegal
commands, etc.; person tries to exercise authority
he does not have.

d. Disobedience - problems related to direct or more
subtle disobedience of direct orders, ignoring of
obviously pertinent regulations, etc.

5. External, Environmental Factors - problems related to
impersonal matters such as weather, equipment, policies,
etc.

Due to infrequent occurrence of certain types of problems, the
Morale and Leader-Subordinate Relations subcategories were combined
for certain analyses.

Mode of influence. The amount of each type of interpersonal
power (French & Raven, 1959) reflected in the leader's action
was rated on a 4-point scale (0 - none or very little; 1 - a small
amount; 2 - a moderate amount; or 3 - a large amount). Descrip-
tions of five modes of influence were provided:

- Expert - the supervisor has a lot of knowledge and
experience, and is a real expert in the work being done.

- Reward - the supervisor can give rewards or make the
job more pleasant.

- Coercive - the supervisor can punish the subordinate
or make the job more unpleasant.

- Legitimate - the supervisor has higher <u>rank</u> and higher
  position in the official structure of the organization.
- Referent - the supervisor is a person the subordinate
  really <u>likes and respects</u>, and he is someone the subor-
  dinate wants to be more like.

Any action may have been judged to reflect large amounts of none,
one, or more than one mode of interpersonal influence.

<u>Difficulty of problem</u>. Difficulty of dealing with the prob-
lem in the described setting was rated on a 4-point scale.

<u>Pressure of setting</u>. On a 4-point rating scale the judges
indicated whether the incident took place in a stressful combat
area or in a relaxed shore duty setting.

<u>Outcomes</u>. Judges rated the outcomes in terms of improvement,
no change, or decrement for eight combinations of individual <u>vs</u>.
group, performance <u>vs</u>. morale, and short-run <u>vs</u>. long-run outcomes.
In addition, on a 5-point scale of improvement-decrement, the
veterans judged the <u>overall</u> outcome of the incident considering
all factors, including performance and morale effects on subor-
dinates, leader, and the Navy.

<center>RESULTS</center>

Reliability of Ratings

Interjudge reliability for ratings on each of the 26 variables
was estimated by computing the intra-class correlation (Guilford,
1954) of the ratings of the 270 incidents for the five judges.
Table 1 presents the interjudge reliability estimates of the

average ratings. The median reliability is .68. The two inter-
judge reliabilities which fall below .50 involve infrequently
occurring problem categories.

Each judge evaluated a set of 30 incidents on two occasions
separated by approximately two weeks. The two sets of ratings were
correlated to provide "test-retest" reliability estimates for each
judge on each variable. The mean of these reliability estimates
for the five judges is presented in column two of Table 1. In five
cases (mainly long-run outcomes) the number of incidents having
relevant content was too small to allow stable reliability esti-
mates. For the remaining 21 variables the median reliability
estimate was .62.

Relationships of Separate Classes of Variables to Outcome

To investigate the relationship of each major class of leader-
ship variable with leadership effectiveness, separate correlational
analyses were conducted for the individual variables and groups of
variables in the study. Table 2 presents correlations with the
overall outcome. Zero-order correlations are presented for
Difficulty of the Problem and Pressure of the Setting. Multiple
correlations are shown for the ten Problem variables and the five
Mode of Influence variables. These results show that the diffi-
culty of the problem and the pressure of the situation do not
account for a significant amount of variance in the outcome.
Nature of the problem was related to leadership effectiveness,
but accounted for only five percent of the criterion variance.
The largest relationship with the outcome of the incident was

found for the modes of interpersonal influence. Approximately 18 percent of the criterion variance was accounted for by the mode of influence used by the leader. Since this study was part of a research program focused on leadership power, this finding was very welcome. It lends support to our second hypothesis.

The order of importance of the types of problems and of the types of influence attempts are shown in Table 3. Step-wise multiple regression analyses were performed with predictor variables added in the order listed. Abuse of authority and disobedience appear to be the most difficult types of problems for leaders to deal with and are the only two types of problems which make unique contributions to overall incident outcomes.

Within the modes of leader actions, the use of expert knowledge, rewards, and personal liking have positive effects, and coercive punishments and the use of legitimate status in the organization have negative effects on the overall outcome. All five modes of leader power made unique contributions to incident outcomes.

Relative Contribution of Class of Variable

As a further test of the second hypothesis, i.e., that leader actions explain the major portion of the variance in incident outcomes, all of the classes of variables in the study were regressed on the overall outcome ratings. The variables were included in the regression analysis in such a way as to test the unique contribution of the leaders' actions. All variables other than the leaders' modes of influence were forced into a step-wise

multiple regression in the following order: Judges (to check for systemic biases in ratings), Problems, Difficulty of the Problem, and Pressure of the Setting. Within the Judges and Problems groups, the variables were allowed to enter the regression in the order of their contribution to the overall outcome criterion. Next, the group of mode of influence variables were entered into the regression equation. This procedure was designed to demonstrate the unique contribution of the leaders' actions to the outcome of the incident after the problem and situational variables were taken into consideration. Table 4 presents the step-wise regression results for the five groups of variables. No systematic relationship was found between the judges and criterion ratings. Type of problem accounted for a significant increase in variance in the criterion, but this amounted only to six percent of the variation in the overall outcome of the incident. Difficulty of the problem and pressure of the situation did not account for additional criterion variance.

By far the most potent set of variables for explaining incident outcomes was the mode of interpersonal influence used by the leader. An increase of 19 percent in criterion variance was realized when the modes of influence were included.

Effects on Various Outcomes

In addition to the rating of overall outcome, the judges provided ratings of several sub-outcomes. There were sufficient numbers of incidents rated on the short-run outcomes and sufficiently high reliabilities to allow separate analyses of these

criteria. Table 5 presents correlations of the influence modes
and the four short-run criteria reflecting combinations of indi-
vidual and group performance and morale outcomes. The multiple
regression results show that in no case was more than eight per-
cent of the outcome variance predictable from the leaders'
actions. Thus, relative comparisons of the most appropriate
actions for separate criteria must be made with great caution.

However, there were nonsignificant tendencies for certain
leader actions to be more appropriate for attaining certain out-
comes. Coercive power was somewhat more detrimental to morale
than performance. The other power forms were equally related to
the performance and morale outcomes, legitimate and referent power
tended to relate more to individual than group outcomes, while
reward power was slightly more related to group outcomes.

Outcomes from Various Problem-Action Combinations

To explore the effectiveness of the alternative modes of
leadership influence on different types of problems another form
of analysis was conducted. Leadership problems were grouped into
six major categories by combining the two morale problems and the
four leader-subordinate relations problems. Incidents were
scored regarding the presence of each type of leadership influence.
A mode of influence was considered to be present if a rating of 2
or 3 (moderate or large amount) was given. In any one incident,
none, one, or more than one type of influence mode may have been
present. All combinations of type of problem and mode(s) of
influence were identified. The mean overall outcome ratings for

problem-action combinations are shown in Table 6. Means are provided for incidents in which (a) a mode of influence was present in conjunction with any one or more other types of influence (e.g., expert overall), (b) that mode of influence was the single type present (e.g., expert singly), (c) that mode was present along with one of the other modes (e.g., expert + reward), and (d) no clear action was taken, i.e., the incident was judged to involve a moderate or large amount of none of the influence modes.

For each type of problem there appear to be some forms of leadership influence that are more effective than others. The most appropriate form of leadership varies for the different types of problems. In many cases the effectiveness of influence forms depends on whether they are used singly or in combination with other influence forms.

Figure 1 displays the mean outcome in incidents where a single, i.e., one and only, mode of influence was present in the leader's action. No mean rating is reported for the use of Reward with Personal Problems since it occurred in fewer than one percent of the incidents. This display suggests that expert power is the most effective power mode for personal, group performance, and morale problems, while reward power is the most effective for individual performance, leader-subordinate, and externally induced problems. The use of coercion and reliance on legitimate power (position of authority) are not effective in dealing with most problems, especially morale problems and problems involving leader-subordinate relations.

Taking an overall view of Figure 1, one gets the impression that when the leader used expertise, rewards, or referent power to solve the problem, the outcome was generally favorable. On the other hand, coercion and rank must be used more judiciously. For certain types of problems, e.g., personal, group performance and external problems, they may be almost as effective as other power forms; for other problems, they may be highly detrimental. The effectiveness of power based on organizational position may be enhanced when it is combined with the use of expertise or rewards (see Table 6).

DISCUSSION

The results of this study provide clear support for the hypothesis that leader behaviors affect the outcome of problem situations in a variety of work settings. The nature of the problem, while significantly affecting the outcome, is far less important. It was also found that different types of leadership behavior are appropriate for different types of problems. In other words, there is no "one best way" to deal with all problem situations. Limited evidence was found for the hypothesis that different types of outcomes (e.g., individual vs. group and performance vs. morale) result from different leadership behaviors.

In previous research by the authors and their colleagues (Nealey & Thornton, 1974), using questionnaires to measure subordinate reactions to various forms of leadership style and modes of influence, it was found that experienced enlisted men in the

Navy preferred leadership based on job knowledge and mutual respect, whereas threats and use of rank were less effective and led to dissatisfaction. Men with less experience in the Navy indicated that all modes of influence would be effective in eliciting effort from them. The present study using content analysis of descriptions of actual leadership incidents confirms the importance of expertise and mutual respect and the potential negative outcomes of coercive and legitimate power.

Leaders can influence the outcomes of problem situations they face. The use of certain modes of interpersonal influence have a direct bearing on the outcome. This research provides one of the few opportunities to make a direct comparison of the relative importance of leadership behavior and several situational determinants. Leader behavior as represented by modes of social power is over three times as important as the situational factors, including the nature of the problem, in accounting for the outcome of the incident.

The findings regarding the effectiveness of leadership based on expert knowledge, the use of rewards, and personal respect support much of the previous research. While Stogdill's (1974) conclusion that "All sources of power yield influence" (p. 292) may be appropriate, there is clear evidence from this study that unfavorable outcomes in terms of performance and morale can result from the inappropriate use of certain modes of interpersonal influence, especially coercion and power based on rank. This is especially true for morale and interpersonal relations problems.

These results substantiate Kipnis and Cosentino's (1969) findings that supervisors use a range of solutions in dealing with subordinate problems.

Theoretical Implications

The French and Raven (1959) theory of social power suggests that power is exercised by five modes of interpersonal influence. In previous research each of these modes of influence have been found to be related to leadership effectiveness (Stogdill, 1974). The current study confirms and extends these conclusions by demonstrating their relevance in a wide variety of problem situations in varied field settings in the Navy. A direct comparison of the relative contribution of each mode of influence demonstrated that while certain approaches (e.g., expert, referent, and reward power) are generally effective, their efficacy varies as a function of the problem faced by the leader.

Methodologically, the study illustrates again the usefulness of the critical incident method by extending its applicability. Previously the method has been used as a means of exploring a new problem area and providing behavioral illustrations usually as a basis for performance appraisal. By guiding the general content areas generated in the incident reporting and by systematic content analysis, this study has demonstrated the usefulness of the method for substantive empirical studies of leadership effectiveness. Furthermore, the study demonstrated that descriptions of leader behaviors can be reliably categorized into the French and Raven influence modes.

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Figure 1. Mean overall outcome as a function of mode of influence applied to six types of leadership problems.
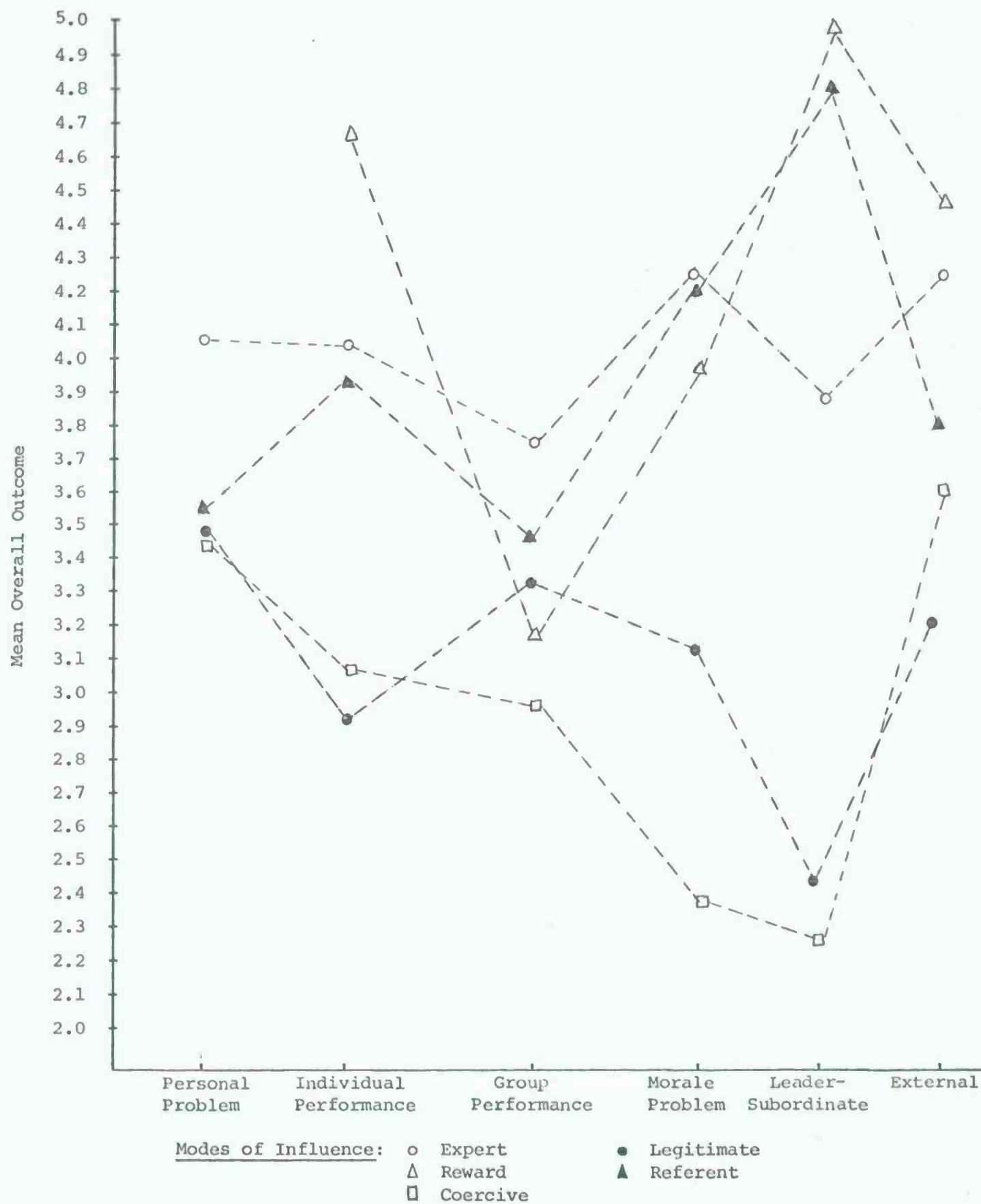
TABLE 1

Estimates of Reliability for Five Judges

	Type of Reliability	
Variables	Inter-Judge	Intra-Judge
Problems		
1 Personal	.72	.49
2a Individual Performance	.73	.62
2b Group Performance	.76	.61
3a Morale - Work	.58	.41
3b Morale - Personnel	.44	.12
4 Leader-Subordinate Relations		
a Poor Communication	.64	.62
b Abuse of Authority	.69	.79
c Uncertain Authority	.27	-
d Disobedience	.58	.52
5 External	.67	.53
Modes of Influence		
Expert	.67	.54
Reward	.74	.71
Coercive	.86	.71
Legitimate	.50	.13
Referent	.78	.52
Problem/Setting Difficulty	.70	.53
Pressure of Setting	.81	.77
Outcomes		
Individual Performance: Short-run	.68	.83
Individual Morale: Short-run	.56	.95
Individual Performance: Long-run	.62	-
Individual Morale: Long-run	.51	-
Group Performance: Short-run	.84	.72
Group MOrale: Short-run	.84	.86
Group Performance: Long-run	.58	-
Group Morale: Long-run	.56	-
Overall Outcome	.91	.84

TABLE 2

Relationships of Leadership Variables
to Overall Outcome of Incident

Variable or Group of Variables	$R(r)^a$	$R^2(r^2)$
Type of Problem	.23**	.05
Difficulty of Problem	.02	.00
Pressure of Setting	.02	.00
Mode of Influence	.42**	.18

**p < .01

[a]r applies to Difficulty of Problems and Pressure of Setting

TABLE 3

Step-wise Multiple Regressions of Several Types of Problems
and Several Modes of Interpersonal Influence
with Overall Outcome of Leadership Incidents

Variable	$\underline{R}$	$\underline{R^2}$	$\underline{r}^a$
Problems			
Abuse of Authority	$.194^b$	.038	-.19*
Disobedience	$.202^b$	.041	-.05
Poor Communication	.210	.044	-.04
Morale-Personnel	.215	.046	-.02
Individual Performance	.221	.049	.00
Uncertain Authority	.226	.051	-.03
Morale-Work	.227	.052	.02
Personal	.228	.052	.07
External			.04
Group Performance			.07
Influence Modes			
Expert	.330	.109	+.33*
Reward	.389	.151	+.23*
Referent	.417	.174	+.22*
Coercive	.422	.178	-.16*
Legitimate	$.423^c$	.179	-.15*

[a] Simple correlation of each separate variable with overall criterion.

[b] The first two variables make unique contributions to the .05 level.

[c] All five modes make unique contribution.

*p < .01

TABLE 4

Step-wise Multiple Regression of Several Groups
of Independent Variables
with Overall Outcomes of Leadership Incidents

Group of Variable	R	R^2
Judges	.06	.00
Problems	.24*	.06
Difficulty of Problem	.24*	.06
Pressure of Setting	.24*	.06
Influence Mode	.50*	.25

*p < .01

TABLE 5

Correlations of Modes of Interpersonal Influence
with Several Sub-Criteria of Outcomes
of Leadership Incidents

Mode of Interpersonal Influence	Short-Run Outcomes			
	Individual Performance	Individual Morale	Group Performance	Group Morale
Expert	.13	.10	.15	.14
Reward	.06	.10	.13	.16
Referent	.20	.22	.08	.13
Coercive	-.04	-.13	-.08	-.14
Legitimate	-.18	-.18	-.02	-.03
Multiple Regression of all Modes of Influence:				
R	.24	.29	.20	.24
R^2	.06	.08	.04	.06

TABLE 6

Mean Overall Outcome When Various Modes
and Combinations of Influence Are Used
to Deal With Leadership Problems

Mode of Influence	Leadership Problems					
	Personal Problem	Individual Performance	Group Performance	Morale Problem	Leader/ Subordinate	External
Expert						
Singly	4.04	4.03	3.77	4.28	3.91	4.26
+ Any Others	4.04	4.07	4.07	4.30	3.97	4.12
+ Reward	4.00	--	4.33	--	2.50	--
+ Coercive	4.00	4.57	--	--	3.67	--
+ Legitimate	--	3.60	4.57	3.60	4.23	3.89
+ Referent	4.00	3.83	4.21	4.56	4.33	--
Reward						
Singly	--	4.67	3.19	4.00	5.00	4.50
+ Any Others	4.43	4.36	4.33	4.36	3.90	4.50
+ Expert	4.00	--	4.33	--	2.50	--
+ Coercive	--	3.83	--	--	3.00	--
+ Legitimate	--	4.50	5.00	--	--	--
+ Referent	--	5.00	4.50	4.40	4.00	--
Coercive						
Singly	3.42	3.06	2.97	2.38	2.28	3.67
+ Any Others	3.65	2.28	2.27	2.67	2.49	3.31
+ Expert	4.00	4.57	--	--	2.67	--
+ Reward	--	3.83	--	--	3.00	--
+ Legitimate	3.69	3.29	3.19	--	2.48	2.88
+ Referent	3.50	4.50	--	2.20	3.00	--
Legitimate						
Singly	3.48	2.92	3.31	3.11	2.45	3.24
+ Any Others	3.55	3.13	3.60	3.19	2.69	3.31
+ Expert	--	3.60	4.57	3.60	4.23	3.89
+ Reward	--	4.50	5.00	--	--	--
+ Coercive	3.69	3.29	3.19	--	2.48	2.88
+ Referent	--	--	--	4.00	2.00	--
Referent						
Singly	3.54	3.93	3.47	4.20	4.82	3.80
+ Any Others	3.94	4.13	4.07	4.36	3.49	3.44
+ Expert	4.00	3.83	4.21	4.56	4.33	--
+ Reward	--	5.00	4.50	4.40	4.00	--
+ Coercive	3.50	4.50	--	2.20	3.00	--
+ Legitimate	--	--	--	4.00	2.00	--
No clear action	3.40	3.21	3.25	3.02	3.30	3.49

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